

18-529-8-1

Sheet 1 of 10  
10/607,080

Form PTO-1449

ATTY. DOCKET NO.

SERIAL NO.

INFORMATION DISCLOSURE CITATION

Robert W. Allington, et al.

## APPLICANT

June 25, 2003

1723

## FILING DATE

## GROUP

**U.S. PATENT DOCUMENTS**

DOCUMENT NO.	PATENT NO	PATENTEE	ISSUE DATE
E6†	1. 4,087,391	Quentin, Jean	5-2-78
E6†	2. 4,430,216	Yoichiro Ito	2-7-84
E6†	3. 5,453,185	Frechet & Svec	9-26-95
E6†	4. 5,728,457	Frechet & Svec	3-17-98
E6†	5. 5,334,310	Frechet & Svec	8-2-94
E6†	6. 5,767,387	Wang	6-16-98
E6†	7. Re. 31,974	Brownlee	8-27-85
E6†	8. 5,439,593	Price	8-8-95
E6†	9. 6,248,798 B1	Slingsby, et al	6-19-01
E6†	10. 4,283,280	Brownlee	8-11-81
E6†	11. 4,313,828	Brownlee	2-2-82
E6†	12. 4,464,240	Hansen	8-7-84

THERKORN

Feb 9, 2005



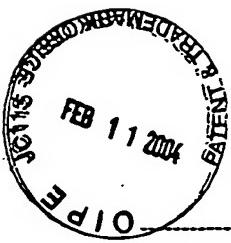
18-529-8-1

Sheet 2 of 10  
10/607,080

Form PTO-1449	ATTY. DOCKET NO.	SERIAL NO.
EGT	13. 4,465,571	Hansen 8-14-84
EGT	14. 3,246,767	Pall et al. 4-19-66
EGT	15. 3,353,682	Pall et al. 11-21-67
EGT	16. 3,598,728	Bixler et al. 8-10-71
EGT	17. 3,696,061	Selsor et al. 10-3-72
EGT	18. 3,796,657	Pretorius et al. 3-12-74
EGT	19. 3,808,125	Good 4-30-74
EGT	20. 3,878,092	Fuller 4-15-75
EGT	21. 3,954,608	Valentin 5-4-76
EGT	22. 4,031,037	Kalal et al. 6-21-77
EGT	23. 4,102,746	Goldberg 7-25-78
EGT	24. 4,169,014	Goldberg 9-25-79
EGT	25. 4,340,483	Lukas et al. 7-20-82
EGT	26. 4,447,328	Kamiyama et al. 5-8-84
EGT	27. 4,486,311	Nakajima et al. 12-4-84
EGT	28. 4,497,710	Wagu et al. 2-5-85
EGT	29. 4,565,832	Kobashi et al. 1-21-86
EGT	30. 4,747,956	Kiniwa 5-31-88
EGT	31. 4,794,177	Peska et al. 12-27-88
EGT	32. 4,889,632	Svec et al. 12-26-89
EGT	33. 4,913,812	Moriguchi et al. 4-3-90

THELKORN

Feb 9, 2005



18-529-8-1

Sheet 3 of 10  
10/607,080

Form PTO-1449

		ATTY. DOCKET NO.	SERIAL NO.
E6T	34.	4,923,610	Svec et al. 5-8-90
E6T	35.	4,952,349	Svec et al. 8-28-90
E6T	36.	5,019,270	Afeyan et al. 5-28-91
E6T	37.	5,130,343	Frechet et al. 7-14-92
E6T	38.	5,135,650	Hjerten et al 8-4-92
E6T	39.	5,183,885	Bergot 2-2-93
E6T	40.	5,228,989	Afeyan et al. 7-20-93
E6T	41.	5,306,426	Afeyan 4-26-94
E6T	42.	5,306,561	Frechet et al. 4-26-94
E6T	43.	5,384,042	Afeyan et al. 1-24-95
E6T	44.	5,389,449	Afeyan et al. 2-14-95
E6T	45.	5,503,933	Afeyan et al. 4-2-96
E6T	46.	5,552,041	Afeyan et al. 9-3-96
E6T	47.	5,605,623	Afeyan et al. 2-25-97
E6T	48.	5,645,717	Hjerten et al. 7-8-97
E6T	49.	5,647,979	Liao et al. 7-15-97
E6T	50.	5,814,223	Hjerten et al. 9-29-98
E6T	51.	5,833,861	Afeyan et al. 11-10-98
E6T	52.	5,916,445	Hjerten et al. 6-29-99
E6T	53.	5,935,429	Liao et al. 8-10-99
E6T	54.	6,238,565 B1	Hatch 5-29-01

THERKORN

Feb 9, 2005



18-529-8-1

Sheet 4 of 10  
10/607,080

Form PTO-1449

ATTY. DOCKET NO.

SERIAL NO.

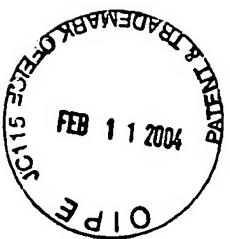
<u>E61</u>	55.	6,318,157	Corso et al.	11-20-01
<u>E61</u>	56.	App 60/178,553	Huber, C.	

## FOREIGN PATENT DOCUMENTS

DOCUMENT NO.	PATENT NO	PUBLISHED PATENT APPLICATION NO.	DATE	COUNTRY OR PATENT OFF.	TRANSLATION YES	NO
57	WO 95/22555	PCT/US95/01966	24.08.95	PCT	X	
58	JP 63-84641	61-228074	4-15-88	JP	X	
59	0 129 295B2	84200856.7	09.11.88	EPO	X	
60	WO 89/07618	154,815	24.08.89	PCT	X	
61	0 399 818A1		12.05.90	EPO	X	
62	WO 99/15024	PCT/US97/16993	01.04.99	PCT	X	
63	WO 01/93974A1	PCT/US01/18650	13.12.2001	PCT	X	
64	EP 0101982	EP19830107709	1984-03-07	EPO	X	
65	WO 01/57263A1	PCT/US01/03706	02.02.2001	PCT	X	
66	WO 00/52455	PCT/US00/05123	29.02.00	PCT	X	
67	WO 00/15321	PCT/US99/20066	01.09.99	PCT	X	
68	0 180 321A2	85306830.2	07.05.86	EPO	X	
69	DE 35 43 348 A1		11.6.87	German	X	
70	DE 39 00272 A1		12.7.90	German	X	
71	DE 43 34351 A1		13.4.95	German	X	
72	0 264 984 A1	87201768.6	27.04.88	EPO	X	

THERKORN

Feb 9, 2005



Sheet 5 of 10

18-529-8-1

10/607,080

Form PTO-1449

ATTY. DOCKET NO.

SERIAL NO.

73	0 282 177A2	88301278.3	14.09.88	EPO	X
74	DE 43 33821A1		6.04.95	German	X
75	0 534 567 A2	92202942.6	31.03.93	EPO	X
76	WO 99/44053	PCT/EP99/01391	02.09.99	PCT	X
77	1,188,736		22.04.70	Britain	X
78	211743		15.01.83	Czech	X
79	6,803,739 (English Translation)		10.03.91	Netherlands	X
80	0 231 684 A186402	09.9	12.08.87	EPO	X
81	0 320 023 A288120747.6		14.06.89	EPO	X
82	0 407 560 B190902731.0		21.06.95	EPO	X
83	0 813 062 A297105607.2		17.12.97	EPO	X
84	0 852 334 A197310361.7		08.07.98	EPO	X
85	WO 90/07965	PCT/US90/00191	26.07.90	PCT	X
86	WO 01/93974 A1	PCT/US01/18650	13.12.2001	PCT	X
87	WO 00/15778	PCT/US99/20596	23.03.00	PCT	X

**OTHER DOCUMENTS (Including Author, Title, Date Pertinent Pages, Etc.)**

EXAMINER  
INITIALS

88 "Monolithic Matrix Accelerates Separation", HIGH TECH SEPARATIONS NEWS, July 2001, Volume 14, No. 2

THERKORN

Feb 9, 2005



Sheet 6 of 10

18-529-8-1

10/607,080

Form PTO-1449

ATTY. DOCKET NO.

SERIAL NO.

- 89 "Rapid reversed-phase separation of proteins and peptides using optimized 'moulded' monolithic poly(styrene-co-divinylbenzene) columns", JOURNAL OF CHROMATOGRAPHY A, 865 (1999) pg 169-174
- 90 Poster Presentation "Macroporous Poly(Styrene-co-Divinyl-benzene) Monoliths for High Throughput Reversed-Phase Separation of Biomolecules", 217<sup>th</sup> ACS National Meeting in Anaheim, March 21, 1999 by Shaofeng Xie
- 91 Poster Presentation "Monolithic Macroporous Poly(Styrene-co-Divinylbenzene) Columns for Rapid or High Throughput Reversed-Phase Separation of Proteins and Peptides", PREP'99- 1999 International Symposium, San Francisco, May 26, 1999, by Shaofeng Xie
- 92 Poster No. 1659P Presentation "High-Speed Bioseparation with Monolithic Columns", Poster No. 1659P, Bioanalytical Separation Session, PITTCON2001, New Orleans, March 5, 2001, by Shaofeng Xie
- 93 Poster Presentation "Applications of Polymeric Monolith Columns for Fast Bioseparations", Presented at ISRPP2000, Ljubljana, Slovenia, by Shaofeng Xie, et al
- 94 Poster Presentation "High Throughput Bioseparations in Monolithic Ion Exchangers", presented at HPLC2000, Seattle, WA by Shaofeng Xie, et al.
- 95 2106P Poster Presentation "Rapid Bio-separations in Columns with Monolithic Separation Media", at Pittcon 2000, New Orleans, LA, by S. Xie, et al.
- 96 "Carbonate Mysteries", Henry Elderfield; Science, Vol. 296, May 31, 2002, 1618 - 1621
- 97 L.R. Snyder, J.J. Kirkland, *Introduction to Modern Liquid Chromatography, Second Edition*, John Wiley & Sons, Inc., (1979) 183-195, 203-204, 492-494
- 98 "High-performance liquid chromatography on continuous polymer beds", S. Hjerten, J-L Liao, and R. Zhang, *J. Chromatogr*, 473 (1989) 273-275

THIEKORN

Feb 9, 2005



18-529-8-1

Sheet 7 of 10  
10/607,080

Form PTO-1449

ATTY. DOCKET NO.

SERIAL NO.

- 99 "Reactive polymers: 61. Reaction of macroporous poly(glycidyl methacrylate-co-ethylene dimethacrylate) with phenol", D. Horak, J. Straka, J. Stokr, B. Schneider, T.B. Tennikova and F. Svec, *Polymer*, 32, no. 6 (1991) 1135-1139
- 100 "REACTIVE POLYMERS, XXV. Morphology of Polymeric Sorbents Based on Glycidyl Methacrylate Copolymers", Z. Pelzbauer, J. Lukas, F. Svec and J. Kalal, *J. Chromatogr*, 171 (1979) 101-107
- 101 "Chiral electrochromatography with a 'moulded' rigid monolithic capillary column", E.C. Peters, K. Lewandowski, M. Petro, F. Svec and J.M.J. Frechet, *Analy. Commun.*, 35 (1998) 83-86
- 102 "High-Performance Membrane Chromatography. A Novel Method of Protein Separation", T.B. Tennikova, B.G. Belenkii, and F. Svec, *J. of Liquid Chromatogr.*, 13(1) (1990) 63-70
- 103 "Continuous beds for standard and micro high-performance liquid chromatography", Jia-Li Liao, Rong Zhang and Stellan Hjerten, *J. of Chromatography*, 586 (1991) 21-26
- 104 "Continuous Beds for Microchromatography: Reversed-Phase Chromatography", Jia-Li Liao, Yi-Ming Li, and Stellan Hjerten, *Analytical Biochemistry*, 234 (1996) 27-30, #1
- 105 "Continuous Beds for Microchromatography: Detection of Proteins by a Blotting Membrane Technique", Jia-Li Liao, Cheng-Ming Zeng, Anders Palm and Stellan Hjerten, *Analytical Biochemistry*, 241 (1996) 195-198
- 106 "High-Performance Liquid Chromatography of Proteins on Compressed, Non-Porous Agarose Beads", Stellan Hjerten and Jia-Li Liao, *J. of Chromatography*, 457 (1988) 165-174
- 107 "The Design of Agarose Beds for High-Performance Hydrophobic Interaction Chromatography and Ion-Exchange Chromatography Which Show Increasing Resolution with Increasing Flow Rate", Stellan Hjerten, Yao Kunquan and Jia-Li Liao, *Makromol. Chrm., Macromol. Symp.* 17 (1988) 349-357
- 108 J. Reusch, D. Josic, *Konigsteiner Chromatographietage* (1991) page 158

THERKORN

Feb 9, 2005



18-529-8-1

Sheet 8 of 10  
10/607,080

Form PTO-1449

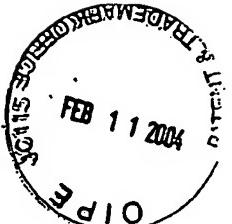
ATTY. DOCKET NO.

SERIAL NO.

- 109 "Perfusion chromatography packing materials for proteins and peptides", N.B. Afeyan and S.P. Fulton, *J. of Chromatography*, 544 (1991) 267-279
- 110 "Flow-through particles for the high-performance liquid chromatographic separation of biomolecules: perfusion chromatography", N.B. Afeyan, N.F. Gordon, I. Mazsaroff, L. Varady and S.P. Fulton, *J. Chromatography*, 519 (1990) 1-29
- 111 "*In Situ Preparation and Evaluation of Open Pore Polyurethane Chromatographic Columns*", F.D. Hileman and R.E. Sievers, *Analytical Chemistry*, V. 45 no. 7 (1973) 1126-1130
- 112 "High Resolution-Low Pressure Liquid Chromatography", T.R. Lynn, D.R. Rushneck, A.R. Cooper, *J. Chromatographic Science*, 12 (1974) 76-79
- 113 "Surface Modified Open-Pore Polyurethane Packings for Liquid Chromatography", D.P. Herman and L.R. Field, *J. Chromatographic Science*, 20 (1982) 55-61
- 114 "Polyurethane Foams and Microspheres in Analytical Chemistry", T. Braun and A.B. Farag, *Analytica Chimica Acta*, 99 (1978) 1-36
- 115 "Coiled High-Efficiency Liquid Chromatography Columns", A.R. Cooper and T.R. Lynn, *Separation Science*, 11(1) (1976) 39-44
- 116 "Ion Chromatography on Methacrylate Ion Exchangers", J.Hradil and F. Svec, *J. of Chromatography*, 475 (1989) 209-217
- 117 "Open-Pore Polyurethane Columns for Collection and Preconcentration of Polynuclear Aromatic Hydrocarbons from Water", James D. Navratil, Robert E. Sievers and Harold Walton, *Analytical Chemistry*, 49(14) (1971) 2260-2263
- 118 "Chemical separations with open-pore polyurethane", James D. Navratil and Robert E. Sievers, *American Lab.* 9(10) (1977) 38-42
- 119 "Open Pore Polyurethane - A New Separation Medium", William D. Ross, *Separation and Purification Methods* 3(1) (1974) 111-131

THECKORN

Feb 9, 2005



18-529-8-1

Sheet 9 of 10  
10/607,080

Form PTO-1449

ATTY. DOCKET NO.

SERIAL NO.

- 120 "In Situ -- Formed Open-Pore Polyurethane as Chromatography Supports", William D. Ross and Robert T. Jefferson, *J. of Chromatographic Science*, 8 (1970) 386-389
- 121 "In Situ Open-Pore Polyurethane as Chromatography Supports", William D. Ross and Robert T. Jefferson, *Advan. Chromatogr. Proc. Int'l Symp.* 6<sup>th</sup>, (1970)
- 122 "39. Preparation and Properties of Open Pore Polyurethane", I.O. Salyer, R.T. Jefferson, J.V. Pustinger and J.L. Schwendeman, *163<sup>rd</sup> National ACS Meeting, Boston, MA* (April, 1972)
- 123 "Preparation and Properties of Open Pore Polyurethane (OPP)", Ival O. Salyer, R.T. Jefferson, John V. Pustinger and James L. Schwendeman, *J. of Cellular Plastics*, 9 (1973) 25-34
- 124 "Applications of Porous Urea/Formaldehyde Polymers", A.M. Usmani, *J. Macromol. Sci.-Chem.*, A19(8&9) (1983) 1237-1246
- 125 Brochure: "Quick Disk", Satlenttechnik/Knauer
- 126 Advertisement: "ConSep™", Millipore Corp., Genetic Engineering News, Sept. 15, 1993
- 127 Brochure: "ConSep™ LC 100 System", Millipore Corp.
- 128 Brochure: "MemSep® Chromatography Cartridges", Millipore Corp.
- 129 "High-Performance Liquid Chromatography-Electrospray Ionization Mass Spectrometry of Single- and Double-Stranded Nucleic Acids Using Monolithic Capillary Columns", Premstaller, Oberacher, Huber, *ANALYTICAL CHEMISTRY*, Vol. 72, No. 18, 4386-4393
- 130 "Urea-formaldehyde resin monolith as a new packing material for affinity chromatography", Xuefei Sun, Zhikuan Chai; *JOURNAL OF CHROMATOGRAPHY A*, 943 (2002) 209-218
- 131 "From Microspheres to monoliths: Synthesis of porous supports with tailored properties by radiation polymerization", Grasselli, Smolko, Hargittai, Safrany, *NUCLEAR INSTRUMENTS AND METHODS IN PHYSICS RESEARCH B* 185 (2001) 254-261

THERKOEN

Feb 9, 2005



18-529-8-1

Sheet 8 of 10  
10/607,080

Form PTO-1449

ATTY. DOCKET NO.

SERIAL NO.

132 "Polymer Reprints", C.H. Do, G.B. Butler, AMERICAN CHEMICAL SOCIETY,  
DIVISION OF POLYMER CHEMISTRY, Vol. 29 (1988), 513-514

133 "Functional Polymeric Microspheres Synthesized by Radiation  
Polymerization", A. Safranj, S. Kano, M. Yoshida, H. Omichi, R. Katakai, M.  
Suzuki; Radiat. Phys. Chem., Volume 46, No. 2 (1995) 203-206

134 "Viscometric and Light Scattering Studies on Microgel Formation by  $\gamma$ -Ray  
Irradiation to Aqueous Oxygen-free Solutions of Poly(vinyl alcohol)", B.  
Wang, S. Mukataka, M. Kodama, E. Kokufuta; Langmuir, Volume 13 (1997)  
6108-6114

THE R. KODA

EXAMINER

Feb 9, 2005

DATE CONSIDERED